

Appln. No. 09/753,591
Amendment dated May 7, 2007
Reply to Office Action mailed December 7, 2006

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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims (deleted text being struck through and added text being underlined):

1. through 37. (Canceled)

38. (Previously Presented) A suspension device for connecting to a frame of a vehicle and a swing arm on which a wheel of the vehicle is mounted, the suspension device comprising:

a housing defining an interior;

a shock absorber mounted on the housing, the shock absorber including a rod movably mounted on the housing such that at least a portion of the rod extends into the interior of the housing and through the housing;

a piston positioned in the interior of the housing and being mounted on the rod of the shock absorber to move with the rod;

an air-bag positioned within the interior of the housing, the air bag being constructed of elastomeric material, the air-bag having a first end mounted on the housing in the interior of the housing and a second end mounted on the piston such that the piston, the housing, and the air bag collectively define an air chamber within the housing;

wherein the housing completely encloses the air-bag.

39. (Previously Presented) The suspension device of claim 38 wherein the air bag includes a perimeter wall with a pair of opposite ends, a first one of the opposite ends of the perimeter wall being mounted on the housing and a second one of the opposite ends of the perimeter wall being mounted on the piston.

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40. (Previously Presented) The suspension device of claim 39 wherein each of the opposite ends of the perimeter wall includes a perimeter flange defining an opening, the perimeter flange at a first one of the opposite ends being secured to the housing and the perimeter flange at a second one of the opposite ends being secured to the piston.

41. (Previously Presented) The suspension device of claim 39 wherein each of the opposite ends of the perimeter wall define an opening, a first one of the openings of the perimeter wall receiving a portion of an end cap of the housing and a second one of the openings of the perimeter wall receiving a portion of the piston.

42. (Previously Presented) The suspension device of claim 41 wherein the end cap seals the opening in the first end of the perimeter wall and the piston seals the opening in the second end of the perimeter wall.

43. (Previously Presented) The suspension device of claim 38 wherein the shock absorber includes a hydraulic piston and cylinder assembly, the cylinder of the shock absorber being mounted on the housing and the piston of the shock absorber being mounted on the rod, the rod being configured to mount on one element of the frame and the swing arm and the cylinder being configured to mount on the other element of the frame and the swing arm.

44. through 45. (Cancelled)

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46. (Previously Presented) A suspension device for connecting to a frame of a vehicle and a swing arm on which a wheel of the vehicle is mounted, the suspension device comprising:

a housing defining an interior;

a shock absorber mounted on the housing, the shock absorber including a rod movably mounted on the housing such that at least a portion of the rod extends into the interior of the housing and through the housing;

a piston positioned in the interior of the housing and being mounted on the rod of the shock absorber to move with the rod;

an air-bag positioned within the interior of the housing, the air bag being constructed of elastomeric material, the air-bag having a first end mounted on the housing in the interior of the housing and a second end mounted on the piston such that the piston, the housing, and the air bag collectively define an air chamber within the housing;

wherein the housing abuts against substantially an entire circumference and substantially an entire length of the air-bag when the air-bag is fully extended.

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47. (Previously Presented) A suspension device for connecting to a frame of a vehicle and a swing arm on which a wheel of the vehicle is mounted, the suspension device comprising:

a housing defining an interior;

a shock absorber mounted on the housing, the shock absorber including a rod movably mounted on the housing such that at least a portion of the rod extends into the interior of the housing and through the housing;

a piston positioned in the interior of the housing and being mounted on the rod of the shock absorber to move with the rod;

an air-bag positioned within the interior of the housing, the air bag being constructed of elastomeric material, the air-bag having a first end mounted on the housing in the interior of the housing and a second end mounted on the piston such that the piston, the housing, and the air bag collectively define an air chamber within the housing;

wherein the housing extends along and about an entire extended length of the air-bag.

48. (Previously Presented) The motorcycle of claim 38 wherein a degree of pressurization of air in the air-bag is adjustable.

49. (Previously Presented) The motorcycle of claim 38 wherein the air-bag is characterized by a support spring force which is a function of compression stroke.

50. (Previously Presented) The motorcycle of claim 49 wherein air in the air-bag can be pressurized to alter the support spring force function of compression stroke.

51. (Previously Presented) The motorcycle of claim 49 wherein the support spring force is a progressive function of compression stroke.

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52. (Previously Presented) The motorcycle of claim 51 wherein increasing air pressure in the air-bag increases the progressive function of support spring force to a compression stroke.

53. (Previously Presented) The motorcycle of claim 49 wherein the support spring force is an exponential function of compression stroke.

54. (Previously Presented) The motorcycle of claim 46 wherein a degree of pressurization of air in the air-bag is adjustable.

55. (Previously Presented) The motorcycle of claim 46 wherein the air-bag is characterized by a support spring force which is a function of compression stroke.

56. (Previously Presented) The motorcycle of claim 55 wherein air in the air-bag can be pressurized to alter the support spring force function of compression stroke.

57. (Previously Presented) The motorcycle of claim 55 wherein the support spring force is a progressive function of compression stroke.

58. (Previously Presented) The motorcycle of claim 57 wherein increasing air pressure in the air-bag increases the progressive function of support spring force to a compression stroke.

59. (Previously Presented) The motorcycle of claim 55 wherein the support spring force is an exponential function of compression stroke.

60. (Previously Presented) The motorcycle of claim 47 wherein a degree of pressurization of air in the air-bag is adjustable.

61. (Previously Presented) The motorcycle of claim 47 wherein the air-bag is characterized by a support spring force which is a function of compression stroke.

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62. (Previously Presented) The motorcycle of claim 61 wherein air in the air-bag can be pressurized to alter the support spring force function of compression stroke.

63. (Previously Presented) The motorcycle of claim 61 wherein the support spring force is a progressive function of compression stroke.

64. (Previously Presented) The motorcycle of claim 63 wherein increasing air pressure in the air-bag increases the progressive function of support spring force to a compression stroke.

65. (Previously Presented) The motorcycle of claim 61 wherein the support spring force is an exponential function of compression stroke.